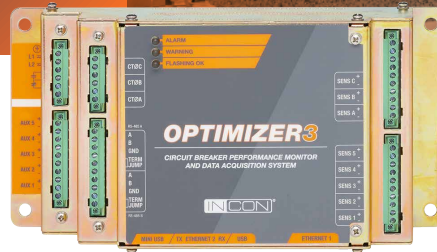


UTILITIES EMPLOY REMOTE MONITORING TO INCREASE THE RESILIENCY OF THEIR CIRCUIT BREAKERS

With early circuit breaker fault detection, utilities improve efficiency, extend equipment service life, and enhance reliability.



CHALLENGE

A major US utility provider serving 3.3 million customers, began looking at ways to increase the resiliency of their network of more than 600 circuit breakers spread across 4,100 square miles. SDG&E needed a cost-effective way to get a comprehensive view of all state-of-health indicators for these critical assets without drastically increasing truck rolls and headcount. Beyond breaker timing (a key health indicator), they wanted to be able to remotely monitor each breaker's insulating gas, voltages, currents, tank heaters – anything that could effect performance.

SOLUTION

The utility provider had previously partnered with Franklin Electric to help them mitigate their downtime and maintenance costs by deploying circuit breaker monitors with modest remote monitoring capabilities. Now they turned to Franklin Electric to help develop an advanced circuit breaker monitor that could deliver the complete health diagnosis they were after. The solution was the **INCON® Optimizer3 Circuit Breaker Monitor**. With 8 sensor inputs, 5 timing inputs, an on-board ambient temperature sensor, and supply voltage monitor, the Optimizer3 and its array of sensors deliver a complete diagnostics report of a circuit breaker's performance. All data is seamlessly fed into their existing back-office software via DNP3 network communication protocol.

RESULTS

Armed with a high degree of circuit breaker performance insight from the Optimizer3, the utility provider can now deploy maintenance personnel with intelligence and only as needed – limiting truck roles, speeding reaction time, and lowering overall maintenance costs. With monitoring data on both the mechanical and electrical performance of a circuit breaker, they are provided with trending analysis that predicts the date of future service. The Optimizer3 also aids them in the mandatory compliance reporting for SF6 gas leaks required by the EPA, by monitoring for and automatically reporting any fugitive emissions.